WHITE LEG SHRIMP (*Penaeus vannamei*) AQUACULTURE IN LITHUANIA

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White leg shrimp

Most popular shrimp in the world

Shrimp farming methods

Outdoor: Ponds

Indoor: Biofloc system

Indoor: Clear water recirculating aquaculture system RAS

Experimental system for shrimp farming

- Marine recirculating aquaculture system (RAS).
- Water volume – 40 m3.
- 8 rearing tanks (total bottom surface area – 28,8 m2).
- Max density- 144 kg/28,8 m2 (5kg/m2).
- Electricity consumption – 5 kw/month.
- 2 employees.

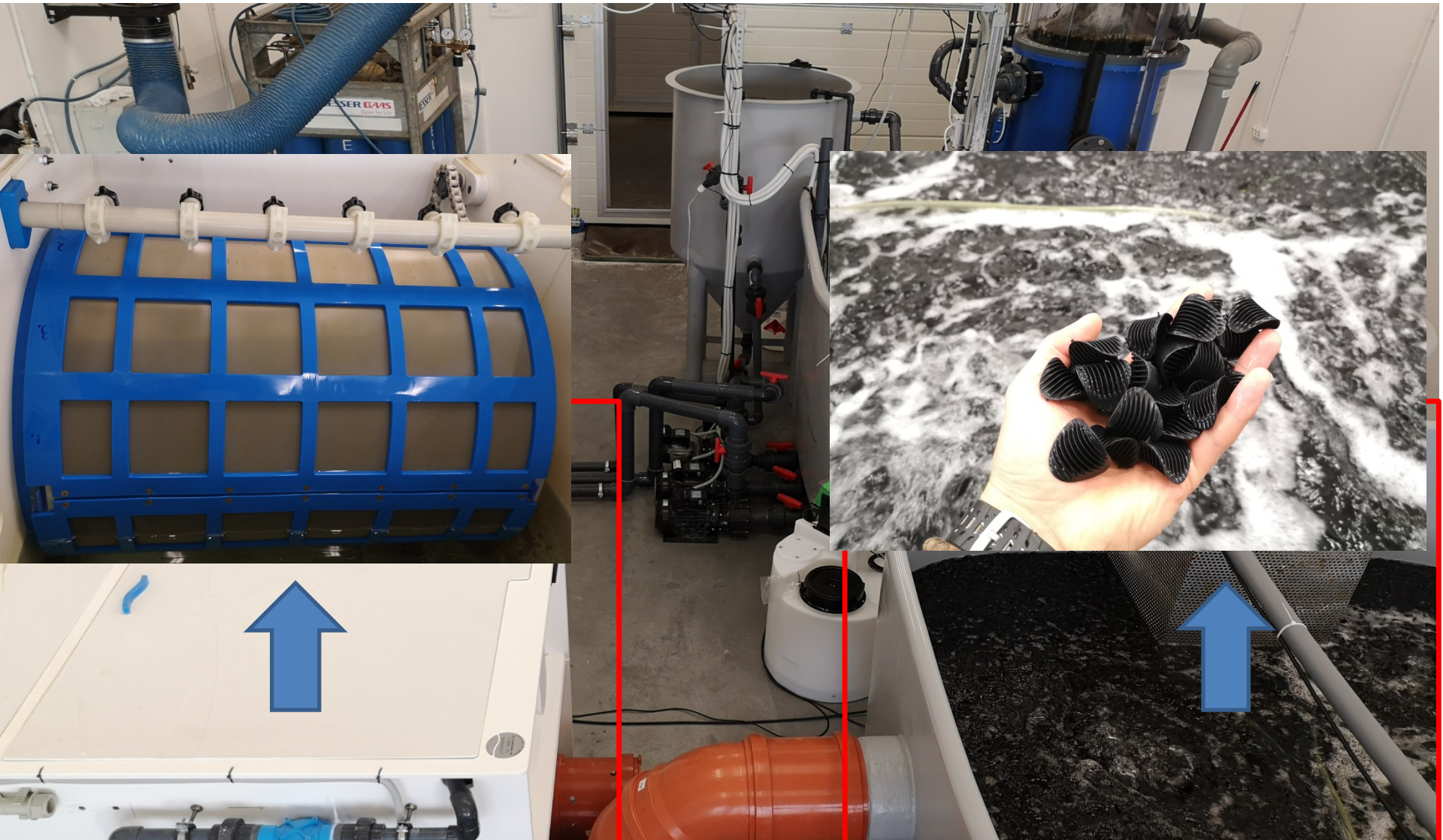
Artificial sea/brackish water

- Salinity – 15-16 ppt.
- Common minerals: Na, Mg, Ca, K.
- Ionic ration Na:K, Mg:Ca.

Aquaculture technologies

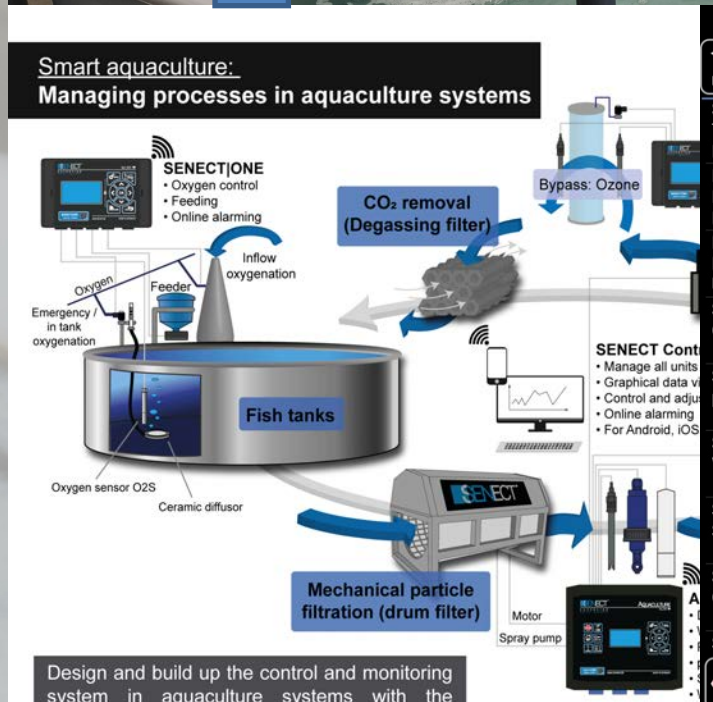
Mechanical filtration

Biological filtration



- Water sterilizing system.

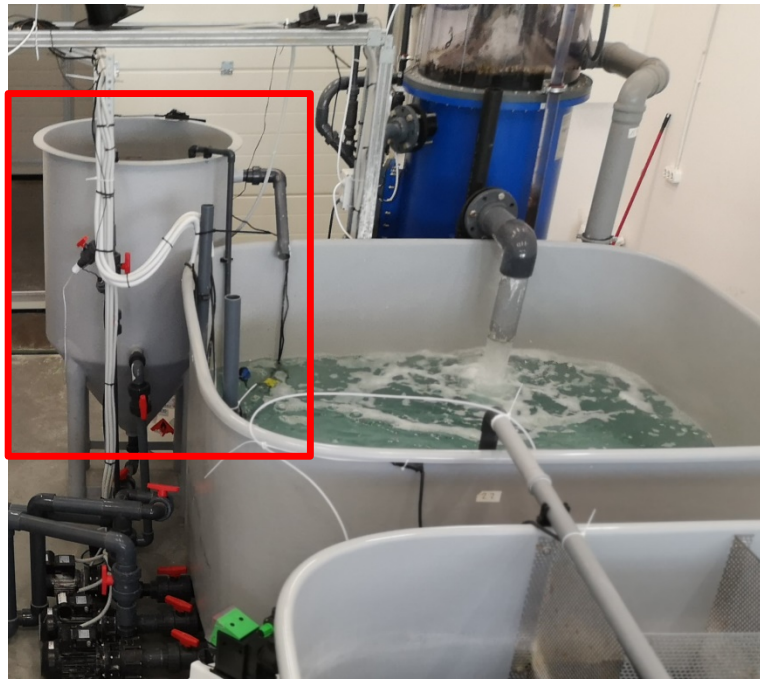
- Water quality monitoring, measuring and controlling system.



- Other: water pumps, air pumps, electricity heater, oxycone, dosing pumps

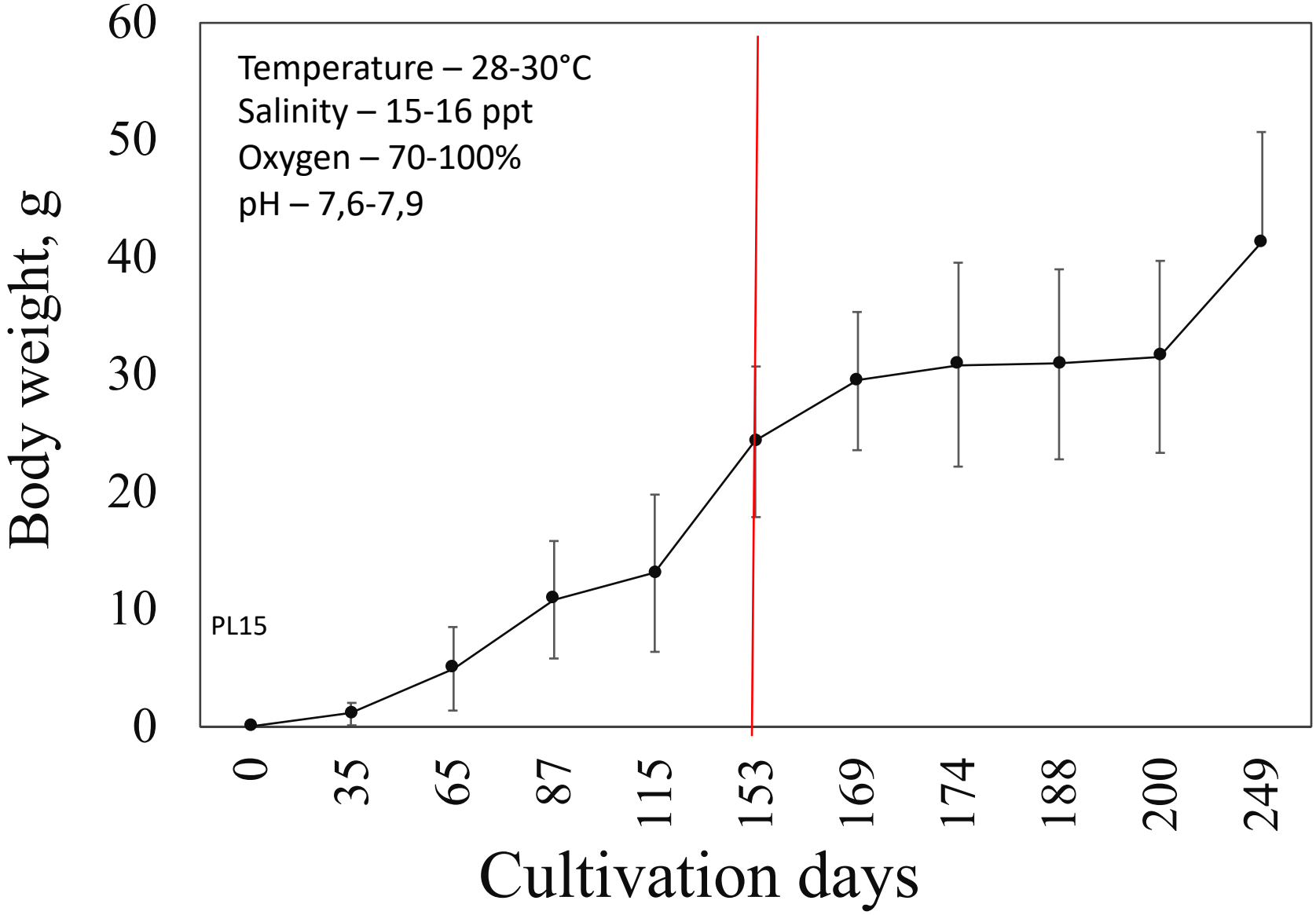
Sustainable aquaculture system

- Denitrificator.



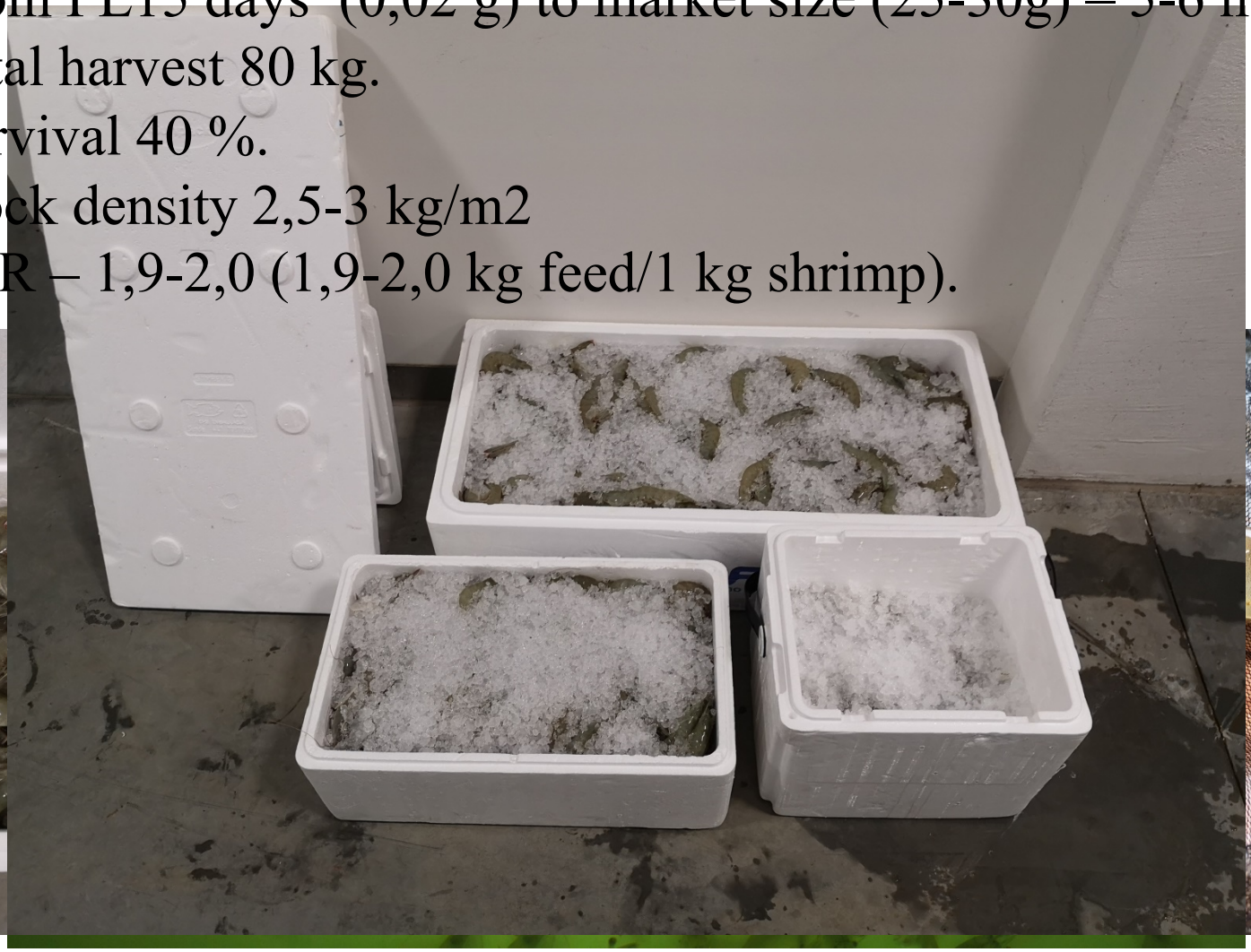
- Solar energy for shrimp farming.

Grow rate of shimp in Klaipeda



First shrimp harvest

- From PL15 days (0,02 g) to market size (25-30g) – 5-6 months.
- Total harvest 80 kg.
- Survival 40 %.
- Stock density 2,5-3 kg/m2
- FCR – 1,9-2,0 (1,9-2,0 kg feed/1 kg shrimp).

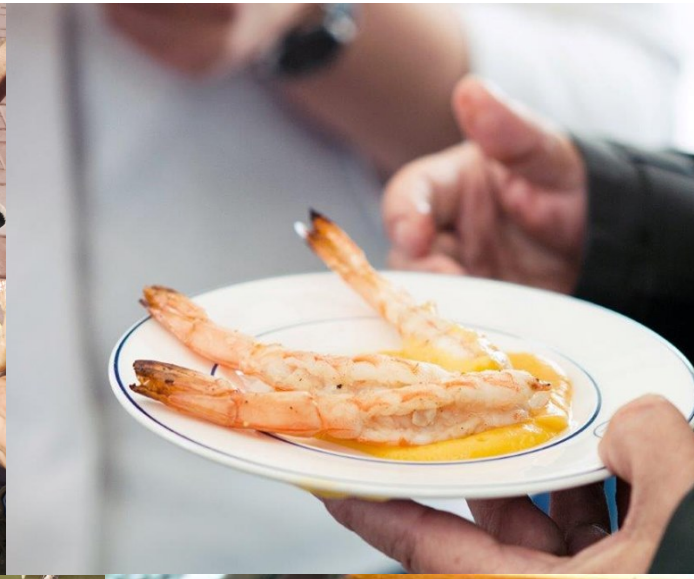


High quality product

- Local, natural product.
- Fresh, never frozen.
- Healthy seafood.
- Without antibiotics, added hormones.

Shrimp BBQ




Shrimp production

- Lithuanian production appr. 0t per year.
- Polish production appr. 0t per year.
- Latvian production appr. 2t per year.
- German production appr. 50t per year.
- European production appr. 150t per year.

It is a free business niche in this region.
Consumption rate is increasing.

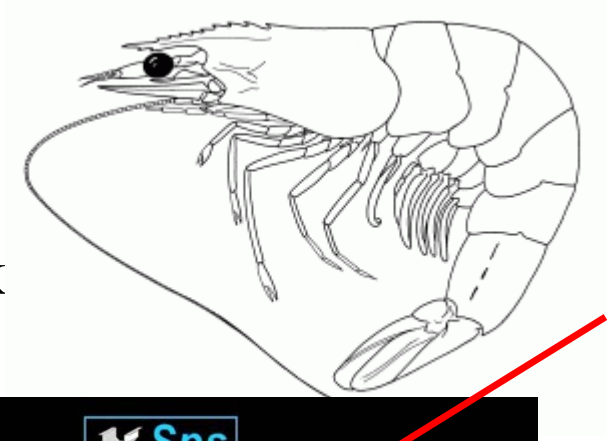
Marketing in Lithuania

- **Fresh shrimp** 25-35 gr.
- 1 kg price 35-50 eur.

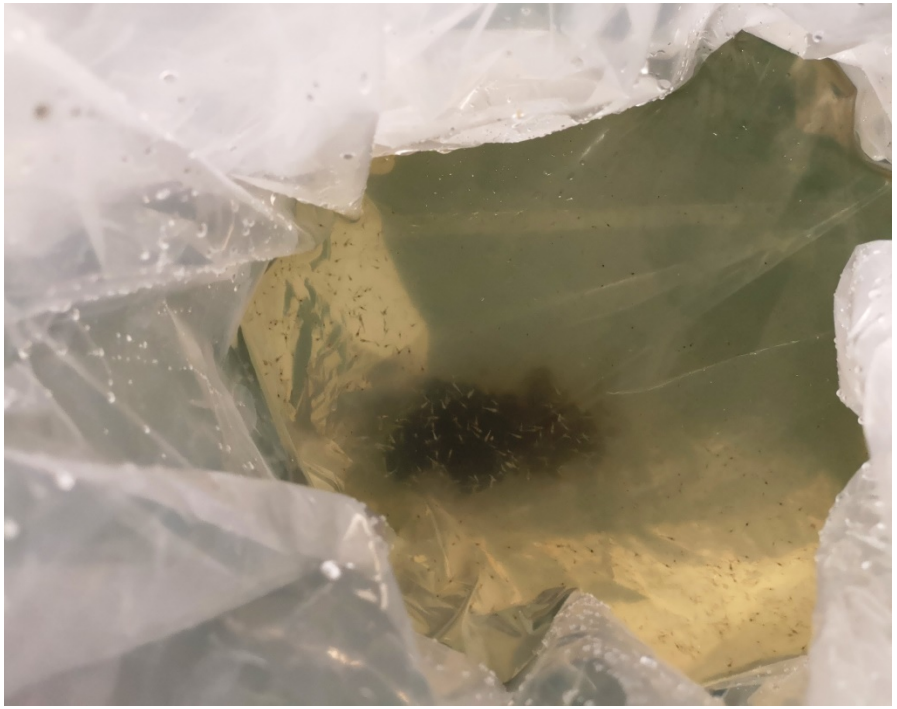
- **Frozen shrimp** 18-25 gr.
- 1 kg price 12-25 eur.

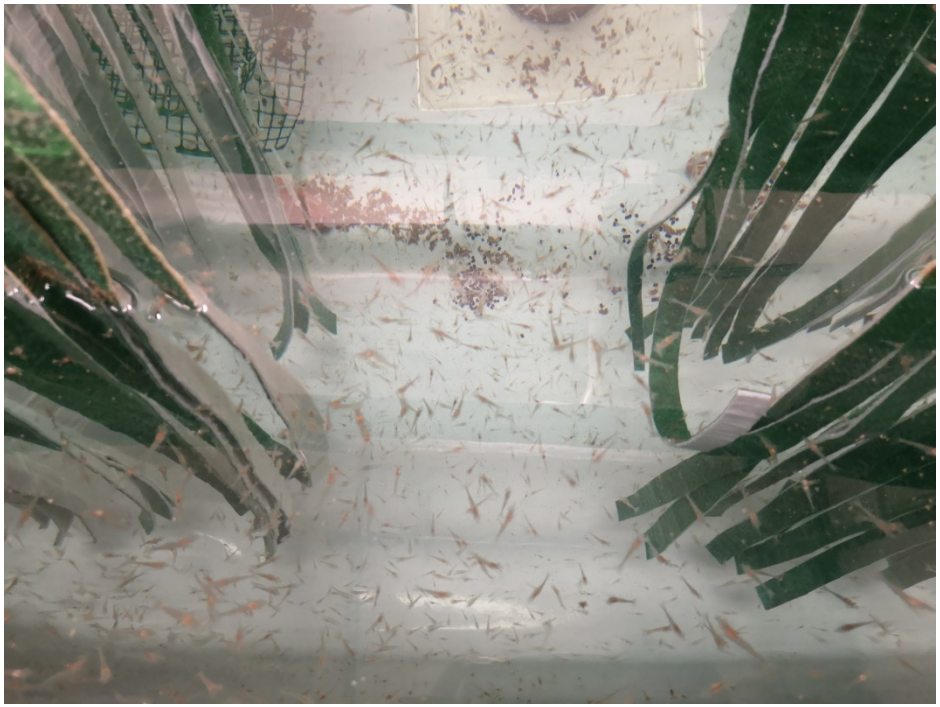
Challenges

- Feeding management.
- Shrimp tank design. Extra surface area in tank
- Shrimp grading system.
- Low cost salt mixture.



Second generation





Thanks for your attention